A3 (4)

TURI SURACE CLEANING LABORATORY CLEANING CHEMICAL QUESTIONNAIRE

See letter for submission instructions.

Material Safety Data Sheet (MSDS) MUST Be Attached (and Technical Data Sheet, if avail

1. Product/Trade Name (Please use a **separate** questionnaire for each cleaning chemical you want listed in the Directo
Compliance Generic Chemical Family: _____
Meets Specified Standard(s): ASTM: _____ Mil Spec: _____ FDA: _____ Other: _____
Primary Cleaner Classification (Check only one):

- ☐ Acidic Aqueous
- ☐ Neutral Aqueous
- ☐ Alkaline Aqueous
- ☒ Caustic
- ☐ Semi-Aqueous
- ☐ Terpene
- ☐ Petroleum distillate
- ☐ Organic
- ☐ Powder detergent
- ☐ Enzymatic/ Microbial
- ☐ Blasting
- ☐ Extracting
- ☐ HCFC
- ☐ Alcohol
- ☐ Other: _____

2. Chemical Constituents (Check all that apply & specify) Example ☒ Builder: *Sodium Hydroxide 50% (as Concentrate)*

Cleaner Containing: **At Least Some Water (____%)** **OR No/Minimal Water**

- ☒ Builder: SiO_2
- ☒ Surfactant: Anionic / Nonionic
- ☐ Emulsifier: _____
- ☐ Saponifier: _____
- ☐ Other: _____
- ☐ Rinse aid/Silicate: _____
- ☐ Water conditioner/Sequestering/ Chelating agent: _____
- ☐ Corrosion inhibitor/Rust prohibitor: _____
- ☐ Anti-microbial: _____
- ☐ Supercritical fluid: _____
- ☐ Blasting medium: _____
- ☐ Other: _____

3. Industrial Applications (**Number** all that apply, **Most Used** = 1)

- ☐ Aerospace/Military
- ☐ Cleanrooms
- ☐ Basic Electronics
- ☐ Medical
- ☐ Metal Finishing
- ☐ Metal Fabrication
- ☐ Optics
- ☐ Painting
- ☐ PCBs
- ☒ Plastics
- ☐ Precision Instruments
- ☐ Printing
- ☐ Semiconductors
- ☐ General Cleaning (floors, etc.
- ☐ Maint./Repair (engines, etc.)
- ☐ Other: _____

4 Contaminant Removal (Check all that apply & specify, if possible) Example ☒ Coatings *Conformal*

- ☐ Adhesives
- ☐ Buffing/polishing compounds
- ☐ Carbon deposits
- ☐ Coatings
- ☐ Cutting/tapping fluids
- ☐ Fluxes
- ☐ Greases
- ☐ Inks
- ☐ Lubricating/ lapping oils
- ☐ Mold releases/ Silicones
- ☐ Paints
- ☒ Resins/Rosins
- ☐ Rust/Scale
- ☐ Waxes
- ☐ Other: _____

5. Substrate Compatibility (Check all that apply)

- ☒ Aluminum
- ☐ Alloys (Specify): _____
- ☐ Brass
- ☒ Carbon steel
- ☐ Ceramics
- ☐ Copper
- ☐ Galvinized steel
- ☐ Glass/quartz
- ☐ Gold
- ☒ Plastic (Specify): elastomers
- ☒ Rubber
- ☒ Stainless steel
- ☒ Steel
- ☐ Sterling/silver
- ☒ Nickel
- ☐ Tin
- ☐ Other: _____

6. Equipment Compatibility (Check all that apply & specify, if applicable)

- ☐ Cold Solvent
- ☐ Vapor Degreasing
- ☐ Manual Wipe
- ☒ Immersion/Soak
- ☒ Mechanical Agitation
- ☒ Ultrasonics
- ☐ Media Blasting
- ☐ Supercritical Extract
- ☐ Low Pressure Spray _____ psi-range
- ☐ High Pressure Spray _____ psi-range
- ☐ Other: _____

7. Recommended Concentrations: 5-10 Percent Volume (range)
Recommended Temperatures: 140-170 Deg. F (range)

8. Important Physical and Chemical Properties:
Maximum theoretical VOC content: 54.8 g/L; 5.2 % Wgt
GWP: _____ Surface Tension: _____ Density: _____
ODP: _____ Kb value: _____ Other _____

9 Cost per pound/gallon: Smallest-unit price: 11.05 Large-volume price 8.00 US

10. Additional pertinent information not found elsewhere on this form or MSDS: _____

TOXICS USE REDUCTION INSTITUTE

THE MASSACHUSETTS
TOXICS USE REDUCTION INSTITUTE

Surface Cleaning Laboratory
University of Massachusetts • Lowell
One University Avenue
Lowell, Massachusetts 01854-2881
Telephone: (508) 934-3133
FAX: (508) 934-3050

CLEANING CHEMISTRY QUESTIONNAIRE

The Toxics Use Reduction Institute maintains a vendor database of alternative cleaning chemistries, cleaning equipment and recycling/treatment equipment. Information from this database is published and provided to companies whom are searching for cleaning alternatives. Please provide the following for each product or product line:

1. Completed Questionnaire 2. MSDS 3. Technical Data sheets

Return responses to: Jay Jankauskas
Toxics Use Reduction Institute
University of Massachusetts-Lowell
One University Avenue
Lowell, MA 01854-2866

Trade Name of Product Compliance

Company Name Berlin Corporation

Address P.O. Box 270 City Indianapolis State IN Zip Code 46206

Contact Person/Title Rick Beckhorst / Mkt. Mgr. Telephone 926-1149 Fax 925-4596

Provide a general description of your product and it's uses.

Biodegradable cleaner to replace acetone and methylene Chloride in the ~~Reinforced~~ Fiberglass Reinforced Plastics Industry.

Please check the classification that describes your product.

- ☐ Saponified Aqueous
- ☒ Semi-Aqueous
- ☐ Alkaline Aqueous
- ☐ Terpene
- ☐ Acidic Aqueous
- ☐ Caustic
- ☐ Petroleum Distillates
- ☐ Organic
- ☐ HCFC
- ☐ Powder Detergent
- ☐ Other (please specify) _____

Please check the appropriate industries in which your product is used.

- ☒ Metal Fabrication/Finishing
- ☒ Electronics/PCB's
- ☐ Electronics/Semiconductor
- ☐ General Electronics
- ☐ Military
- ☒ Printing
- ☐ Precision Instruments
- ☐ Medical
- ☒ General Cleaning/Maintenance
- ☐ Chemical Industry (tank & piping boil outs)
- ☒ Other (please specify) Fiberglass

Please check the contaminants that you product is known to remove.

- ☐ Adhesives
- ☒ Buffing/polishing/lapping compounds
- ☐ Carbon Deposits
- ☐ Conformal Coatings
- ☒ Fluxes
- ☐ Other (please specify) _____
- ☒ Inks
- ☒ Greases
- ☐ Mold Release
- ☒ Oils
- ☐ Paints/coatings
- ☐ Rust
- ☐ Scale
- ☒ Silicones
- ☒ Waxes

Please check the materials with which your product is compatable.

- [x] Electronics
- [ ] Ferrous Metals
- [x] Plastics
- [x] Rubber
- [x] Precious Metals (Gold, Silver)
- [ ] Copper and Brass
- [x] Aluminum and Aluminum Alloys

Please check the following cleaning processes with which your product is compatable.

- [ ] High Pressure Spray
- [ ] Low Pressure Spray
- [x] Immersion
- [x] Ultrasonics
- [ ] Steam Cleaning
- [x] Cold Solvent Cleaning
- [ ] Vapor Degreasing

Is your product designed to emulsify, dissolve or displace contaminants? (circle one)

If water dilutable, what is the recommended concentration range that your product may be used at?

10-20%

What is the recommended temperature range that your product may be used at?

Ambient - 140°F

Check off the following that your chemistry contains.

- [x] Rinse Aids
- [x] Silicates
- [x] Sequestering Agents
- [ ] Anti-foam Agents
- [ ] Corrosion Inhibitors
- [ ] Caustic

What is the average price of your product per gallon or lb? 5.5 gallon; $8.65/gallon delivered
Quantity discounts available

Does your product meet any cleaning standards (ASTM, military or aircraft specs, FDA approval, etc.). If so please list.

NONE

Physical Properties

Percent Volatile: 79.5%

Flash Point: NONE

Vapor Pressure: Unknown

pH of Concentrate: 13.1 ± .2

Surface Tension: Unknown

Maximum Theoretical VOC Content: 5.2% by wgt.

HMIS Ratings:

Health: 1

Flammability: 0

Reactivity: 0

COMPLIANCE

DESCRIPTION:

A liquid cleaning concentrate designed to replace Acetone and Methylene Chloride in the Fiberglass Reinforced Plastics Industry (FRP). This water-based cleaner is a biodegradable detergent that emulsifies resins and separates them out of solution. **Compliance contains no phosphates, butyl cellosolve, or petroleum-based solvents.**

TYPICAL CHEMICAL CHARACTERISTICS:

Chemical Composition:	blend of detergents, silicates, water softening agents and solvents
Physical Form:	
- color	light-yellow
- odor	citrus
- viscosity	water-thin
- weight	8.79 lbs./gal.
- specific gravity	1.054
Biodegradable:	yes
Phosphate-Free:	yes
Flash Point:	none
Foaming Tendency:	medium
pH of Concentrate:	13.1 $\pm$ 0.2
Total Active:	20.5 $\pm$ 0.5%
Effect of Working Solution on Material Surfaces:	Safe on most metals, plastics, and elastomers.
VOC Content of Concentrate:	Less than 0.5 lbs./gallon

METHOD OF APPLICATION:

Bucket and Brush
Dip
Spray Gun Lines
Resin Feeder Lines

Brulin
THE BRULIN CORPORATION

Label Release

Number: 431-804C Date: 07-29-93
Replaces No.: 431-804B Dated: 01-23-92

COMPLIANCE

THE ENVIRONMENTALLY SAFE RESIN CLEANER

- CONTAINS NO ACETONE OR METHYLENE CHLORIDE
- ECONOMICALLY DILUTES IN WATER
- NONFLAMMABLE AND NONCOMBUSTIBLE
- BIODEGRADABLE
- CONTAINS NO PHOSPHATES

CAUTION
USE IN WELL VENTILATED AREA
CONTAINS DIPROPYLENE GLYCOL METHYL ETHER
AND PROPYLENE GLYCOL METHYL ETHER
Read complete caution statement before use.

KEEP OUT OF REACH OF CHILDREN

BEFORE USE:
USE ONLY IN A WELL VENTILATED AREA. Read complete caution statement before use.
COMPLIANCE is a liquid cleaning concentrate designed to replace Acetone and Methylene Chloride in the Fiberglass Reinforced Plastics Industry (FRP). This water-based cleaner is a biodegradable detergent that emulsifies resins and separates them out of solution. Separated resins are then properly disposed of and the COMPLIANCE cleaning solution may be re-used.

COMPLIANCE can be diluted with water for cleaning resin rollers and applicators. It can be used where methylene chloride may have been previously used to purge resin feed lines. COMPLIANCE is safe to use for removing fresh resin spills from hands, equipment, brushes, etc.

DIRECTIONS

FOR RESIN BRUSHES AND ROLLERS: Dilute 1 part COMPLIANCE with 10 parts water. Immerse brushes and rollers in tank filled with COMPLIANCE solution. Brushing is recommended for complete removal. Rinse with water and air dry.

EQUIPMENT CLEANING: Dilute 1 part COMPLIANCE with 10 parts water. Apply to equipment with brush, agitate gently. Rinse with water and air dry.

PURGING FEED LINES OR PUMPS OF POLYESTER OR EPOXY RESINS: Circulate at 1 part COMPLIANCE with 5 parts water. (If necessary heat to 140°F.). Follow-up with water purge and high pressure air purge.
The effectiveness of COMPLIANCE is greatly enhanced when used in conjunction with a COMPLIANCE CLEANING STATION.

COMPLIANCE is an industrial product, not intended for home use.

CAUTION
USE ONLY IN A WELL VENTILATED AREA – AVOID PROLONGED BREATHING OF VAPORS.

Contains Dipropylene Glycol Methyl Ether and Propylene Glycol Methyl Ether. Keep away from eyes, skin and clothing. Wear chemically resistant gloves if skin contact is likely. May cause eye irritation. Prolonged or repeated exposure may cause skin irritation. Ingestion may cause burns to mouth and throat. Excessive inhalation may cause drowsiness.

FIRST AID:
If swallowed – Do not induce vomiting. If conscious, dilute by giving two glasses of water. Get prompt medical attention.
Eyes -- Immediately flush with large amounts of cool water for at least 15 minutes, lifting upper and lower lids occasionally. Get prompt medical attention.
Skin -- Wash with mild soap and water. Remove contaminated clothing and launder before reuse. If irritation persists, consult a physician.

KEEP OUT OF REACH OF CHILDREN

Reorder Product No. 431013

HOME OFFICE/PLANT: P.O. Box 270, Indianapolis, IN 46206-0270 • (800) 776-7149 • (317) 923-3211 • FAX (317) 925-4596